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(54) ***GENE THERAPY*** FOR INHIBITION OF ANGIOGENESIS

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No Image Available.

Abstract

The present invention relates to methods of ***gene therapy*** for inhibiting angiogenesis associated with solid tumor growth, tumor metastasis, inflammation, psoriasis, rheumatoid arthritis, hemangiomas, diabetic retinopathy, angiofibromas, and macular degeneration. ***Gene therapy*** methodology is disclosed for inhibition of primary tumor growth and metastasis by gene transfer of a nucleotide sequence encoding a soluble form of a ***VEGF*** tyrosine kinase receptor to a mammalian host. The transferred nucleotide sequence transcribes mRNA and a soluble receptor protein which binds to ***VEGF*** in extracellular regions adjacent to the primary tumor and vascular endothelial cells. Formation of a sVEGF-R/***VEGF*** complex will prevent binding of ***VEGF*** to the KDR and FLT-1 tyrosine kinase receptors, antagonizing transduction of the normal intracellular signals associated with vascular endothelial cell-induced tumor angiogenesis. In addition, expression of a soluble receptor tyrosine kinase may also impart a therapeutic effect by binding either with or without VEGFs to form non-functional heterodimers with full-length ***VEGF*** -specific tyrosine kinase receptors and thereby inhibiting the mitogenic and angiogenic activities of VEGFs.